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ABSTRACT OF THE DISCLOSURE

Methods and apparatus for enhancing diagnosis of myocardial infarctions generally compare cardiac data from multiple-lead ECG devices with similar stored data for previous patients with cardiac ischemia. Generally, data from between about 30 and about 130 leads is used to construct body surface maps of multiple patients and those maps are sorted and stored based on presence of ischemia, location of ischemia, size of ischemia and/or the like, for each patient. When a new patient is then evaluated with a multiple-lead ECG, data from that patient can be compared with stored data from the previous patients and the new-patient data can be matched to similar stored data. Thus, characteristics about the new patient's ischemia can be determined, such as presence, location and/or size of a myocardial infarction. The ECG device may be deployed as a set of panels to be applied to the patient, and a display device may be provided to a physician for enhanced diagnosis.